

8. (Amended) A polynucleotide probe which comprises a fragment of at least 15 nucleotides of a polynucleotide as defined in claim 5 [any one of claims 4 to 7], optionally carrying a revealing label.

9. (Amended) A recombinant vector carrying a polynucleotide as defined in claim 5 [any one of claims 4 to 7].

10. (Amended) An antibody capable of binding a polypeptide or fragment thereof as defined in claim 1 [any one of claims 1 to 3].

12. (Amended) A test kit for detecting the presence or absence of a pathogenic mycobacterium in a sample which comprises a polynucleotide according to claim 4 [any one of claims 4 to 8], a polypeptide according to claim 1 [any one of claims 1 to 3], a polypeptide which comprises a sequence selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto, or an antibody according to claim 10 [, any one of claims 10 or 11].

13. (Amended) A method of detecting the presence or absence of antibodies in an animal or human, against a pathogenic mycobacteria in a sample which comprises:

(a) providing a polypeptide according to [any one of claims 1 to 3] claim 1 or a polypeptide which comprises a sequence selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto, which comprises an epitope;

(b) incubating a biological sample with said polypeptide under conditions which allow for the formation of an antibody—antigen complex; and

(c) determining whether antibody-antigen complex comprising said polypeptide is formed.

14. (Amended) A method of detecting the presence or absence of a polypeptide according to [any one of claims 1 to 3] claim 1 or a polypeptide which comprises a sequence

selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto in a biological sample which method which comprises:

- (a) providing an antibody according to claim 10 [any one of claims 10 and 11];
- (b) incubating a biological sample with said antibody under conditions which allow for the formation of an antibody-antigen complex; and
- (c) determining whether antibody-antigen complex comprising said antibody is formed.

15. (Amended) A method of detecting the presence or absence of cell mediated immune reactivity in an animal or human to a polypeptide according to claim 1 [claims 1 to 3] or a polypeptide which comprises a sequence selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto, which method comprises

- (a) providing a polypeptide according to claim 1 [any one of claims 1 to 3] or a polypeptide which comprises a sequence selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto, which comprises an epitope;
- (b) incubating a cell sample with said polypeptide under conditions which allow for a cellular immune response such as release of cytokines or other mediator or reaction to occur; and
- (c) detecting the presence of said cytokine or mediator or cellular response in the incubate.

18. (Amended) A method of treating or preventing mycobacterial disease in an animal or human caused by mycobacteria which express a polypeptide according to [claims 1 to 3] claim 1 or a polypeptide which comprises a sequence selected from the sequences of Seq.ID.No: 31, 33, 35, 37 and 39 or a polypeptide substantially homologous thereto, which method comprises vaccinating or treating an animal or human with an effective amount of said polypeptide.